Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Amendment of the Commission's Rules to Promote Aviation Safety.	)	WT Docket No. 19-140

COMMENTS OF Powertech Labs

September 1, 2019

I. ABOUT POWERTECH LABS

A. Powertech Labs wishes to comment on WT Docket number 19-140, Amendment of the Commission's Rules to Promote Aviation Safety.

Powertech Labs Inc., is one of the largest testing and research laboratories in North America, situated in British Columbia, Canada. Our 11- acre facility offers 15 different testing labs engaged in high technology, utilities, telecommunications, critical infrastructure communications and energy research and development. Powertech has 220 employees, mostly technologists, professional engineers and PhDs, with representatives located in the United States. Our client base is global and focused on critical infrastructures for communication, energy and electric power.

B. Powertech Labs, is the only WiMAX Forum Designated Certification Laboratory for AeroMACS certification. Powertech Labs works closely with the AeroMACS community and vendors to advance and promote the AeroMACS technology and standards. Powertech Lab's representative participate in the WiMAX Forum Aviation Working Group.

The Critical Infrastructure Communications group in Powertech carries out the AeroMACS certification on behalf of the WiMAX Forum on WiMAX Forum member's products. Powertech Labs Inc., has ISO 17025 accreditation for the AeroMACS Radio Conformance Tests and is in the process of applying this accreditation to the AeroMACS Protocol Conformance Tests. Powertech Lab's Critical Infrastructure Communications group has extensive experience of secure and private 4G networks and technologies. This service validates AeroMACS products to ensure interoperability between different AeroMACS vendors and compliance to the AeroMACS system profile. Powertech is committed to continue supporting the AeroMACS standards and certification needs of the industry.

II. ELIGIBILITY (NPRM ¶ 38)

A. The Commission's eligibility rules should encourage the robust deployment of AeroMACS services.

B. The proposed rules would preclude important stakeholders from using AeroMACS unless the airport owner or operator consent. In effect, airports would become the gatekeepers of AeroMACS services. Powertech proposes that the following 4 items be considered for inclusion.

1. From Powertech Lab's experience and understanding of the use of AeroMACS technology, the airline industry plans to use AeroMACS services to improve the safety and on-time flight performance of commercial airline operations. AeroMACS will enable valuable aircraft system data to be sent wirelessly as soon as the aircraft lands, helping

monitor aircraft health, reducing aircraft turnaround time, and allowing the future data intensive aircraft to send information seamlessly. As a result, it is critical that airlines are included in the FCC's list of those automatically eligible to be users of AeroMACS.

2. In addition, aeronautical communications network providers ("ACNPs") play a critical role in facilitating communications in airports throughout the country. In particular, many smaller and regional airport hubs use our services to provide a dedicated common user network to aviation users. To help facilitate the rapid and robust deployment of AeroMACS, which will improve safety and regularity of flight for American air travelers, ACNPs should be identified among those automatically eligible to be users of AeroMACS.

3. Manufacturers or prospective users of AeroMACS and their representatives plan to use AeroMACS for purposes of network development and product demonstrations on a temporary basis. Consequently, developmental users of AeroMACS should be identified among those automatically eligible to be users of AeroMACS.

4. The Commission traditionally seeks to remove barriers to access to wireless services. It should take a similar approach in the service rules applicable to AeroMACS. By adopting expanded eligibility rules, the Commission will remove artificial barriers to AeroMACS services and ensure that all interested stakeholders will have access to channels in the AeroMACS band.

III. CHANNEL MANAGEMENT (NPRM ¶ 40)

A. Designating a single, nationwide channel manager is the best way to ensure the consistent, efficient and fair management of AeroMACS channels. Powertech Labs supports the following;

1. A channel manager will ensure nationwide consistency for access to AeroMACS spectrum.

a. A channel manager will save eligible users time and money that otherwise would be spent negotiating different allocation and interference procedures at each airport.

b. Use of a single, nationwide channel manager will provide AeroMACS users with one point of contact regardless of the airport at which they are operating.

2. The channel manager will maximize the efficient use of spectrum, enabling AeroMACS to meet the unique needs of each location.

a. Communications needs vary from airport to airport based on a number of factors, including an airport's size and the region of the country in which the airport is located. The channel manager will allocate channels between non-Federal AeroMACS users to maximize efficient use of the spectrum at each airport.

b. The channel manager also will help coordinate AeroMACS spectrum access with federal users. This coordination will ensure the efficient use of AeroMACS spectrum by employing sharing approaches tailored to the needs of the federal and non-federal AeroMACS users at each airport.

3. A channel manager will ensure fair management of AeroMACS channels.

a. Under the rule proposed by the WiMAX Forum, the channel manager will make its services available on a non-discriminatory basis to all eligible AeroMACS users.

b. To further ensure fair management of AeroMACS channels, the FCC should designate as channel manager an entity that is: impartial; an expert in AeroMACS technology and applications; and a non-profit.

IV. COORDINATION WITH OTHER AUTHORIZED USERS (NPRM ¶¶ 41-43)

A. A channel manager will help promote coordination with other authorized users of the band.

1. The NPRM seeks comment on how to promote coordination between AeroMACS users and other authorized users of the band, specifically Globalstar and operators of flight test systems.

2. The channel manager approach will promote such coordination. The channel manager will serve as the single point of contact for non-Federal AeroMACS users should any coordination issues arise with these other authorized users of the band.

V. LICENSING AND COORDINATION (NPRM ¶¶ 37, 39)

A. Flexible licensing and coordination rules will promote robust deployment of AeroMACS services and applications.

B. The proposed licensing rules would impose unnecessary and onerous costs on AeroMACS users that will constrain the deployment of AeroMACS.

1. The proposed requirement for individual licensing of fixed, base and mobile AeroMACS units is unnecessary and onerous.

2. The location information gained from such an individual licensing regime will already be available with the channel manager, who will use such information in coordinating the use of AeroMACS spectrum at each airport. A requirement for users to also make this location information available through the FCC's Universal Licensing System is duplicative and administratively burdensome.

3. The NPRM suggests that this information must be readily available to the Commission. To the extent this information is ever needed by the Commission, it will be available with the channel manager.

4. Rather than requiring such an onerous individual licensing regime, AeroMACS operations should be licensed by rule. Such an approach would be more administratively efficient and will encourage robust deployment and availability of AeroMACS services and applications.

C. The proposed coordination rules similarly would impose unnecessary delays and costs on AeroMACS users.

1. The proposal to require pre-coordination of AeroMACS deployments with FAA Regional Offices will impose significant and unnecessary delays and costs on AeroMACS users.

2. Coordination with federal AeroMACS users will be performed by the channel manager. Indeed, one of the channel manager's central roles will be to coordinate AeroMACS spectrum use between federal and non-federal users.

3. Rather than impose a coordination requirement that is duplicative of the coordination that will necessarily be performed by the channel manager, the Commission should reject a pre-coordination requirement on individual licensees. Coordination by the channel manager will be more efficient and expedient.

VI. TECHNICAL RULES (NPRM ¶ 44)

A. The international nature of AeroMACS services requires the adoption of technical rules that mirror those standards approved by international technical standards bodies. The FCC should adopt the proposed technical rules based on the requirements currently incorporated in the International Civil Aviation Organization Standards and Recommended Practices and in the RTCA Minimum Operational Performance Standards.

VII. CONCLUSION

Powertech Labs appreciates FCC allowing contributions and comments to it's decision process.

The views expressed by Powertech Labs in this proposal would allow the implementation of AeroMACS networks to the benefit of all users. As the Commission has stated AeroMACS is a safety of life service, therefore have a nationwide AeroMACS channel manager would allow the co-ordination of spectrum resource across all users of the service and support the implementation in an efficient manner.

The technical rules should comply with the RTCA's AeroMACS Minimum Operational Performance Standard and ICAO's AéroMACS Standards and Recommended Practices.

Respectfully submitted,

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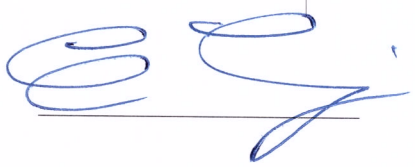
By: 

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